# HMPE Slings Eye \& Eye 

## HH-EEP

| HHI PART NUMBER | Nominal Diameter | Size \# (Circ.) | Approx. Wgt Rope | Working Load Limit Vertical | Sling Minimum Tensile Strength Vertical |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Inches | Inches | Lbs/FT | Pounds | Pounds |
| HH-11-EEP | 7/16" | 1-1/4" | 0.042 | 4,200 | 21,000 |
| HH-12-EEP | 1/2" | 1-1/2" | 0.064 | 6,260 | 31,300 |
| HH-14-EEP | 9/16 ${ }^{\prime \prime}$ | 1-3/4" | 0.079 | 7,580 | 37,900 |
| HH-16-EEP | 5/8" | 2 " | 0.106 | 10,280 | 51,400 |
| HH-18-EEP | $3 / 4{ }^{\prime \prime}$ | 2-1/4" | 0.133 | 13,700 | 68,500 |
| HH-22-EEP | 7/8' | 2-3/4" | 0.196 | 18,520 | 92,600 |
| HH-24-EEP | 1 " | $3^{\prime \prime}$ | 0.234 | 22,000 | 110,000 |
| HH-28-EEP | 1-1/8" | 3-1/2" | 0.319 | 29,400 | 147,000 |
| HH-30-EEP | 1-1/4" | 3-3/4" | 0.362 | 33,000 | 165,000 |
| HH-32-EEP | 1-5/16" | 4" | 0.417 | 39,200 | 196,000 |
| HH-36-EEP | 1-1/2" | 4-1/2" | 0.517 | 44,200 | 221,000 |
| HH-40-EEP | 1-5/8" | $5^{\prime \prime}$ | 0.66 | 58,200 | 291,000 |
| HH-44-EEP | 1-3/4" | 5-1/2" | 0.78 | 62,800 | 314,000 |
| HH-48-EEP | $2^{\prime \prime}$ | $6{ }^{\prime \prime}$ | 0.91 | 71,000 | 355,000 |
| HH-52-EEP | 2-1/8" | 6-1/2" | 1.09 | 85,600 | 428,000 |
| HH-56-EEP | 2-1/4" | $7{ }^{\prime \prime}$ | 1.22 | 96,200 | 481,000 |
| HH-60-EEP | 2-1/2" | 7-1/2" | 1.48 | 106,000 | 530,000 |
| HH-64-EEP | 2-5/8" | 8" | 1.67 | 119,200 | 596,000 |
| HH-68-EEP | 2-3/4" | 8-1/2" | 1.87 | 132,000 | 660,000 |
| HH-72-EEP | $3^{\prime \prime}$ | $9{ }^{\prime \prime}$ | 2.14 | 156,000 | 780,000 |
| HH-76-EEP | 3-1/8" | $9-1 / 2^{\prime \prime}$ | 2.35 | 170,000 | 850,000 |
| HH-80-EEP | $3-1 / 4^{\prime \prime}$ | $10^{\prime \prime}$ | 2.61 | 188,000 | 940,000 |
| HH-84-EEP | 3-1/2" | 10-1/2" | 2.98 | 221,600 | 1,108,000 |
| HH-88-EEP | $3-5 / 8^{\prime \prime}$ | $11^{\prime \prime}$ | 3.24 | 250,000 | 1,250,000 |
| HH-92-EEP | 3-3/4" | 11-1/2" | 3.43 | 263,400 | 1,317,000 |
| HH-96-EEP | 4 " | 12 " | 3.94 | 304,000 | 1,520,000 |
| HH-100-EEP | 4-1/8" | 12-1/2" | 4.57 | 324,400 | 1,622,000 |
| HH-104-EEP | 4-1/4" | 13 " | 5.14 | 339,400 | 1,697,000 |
| HH-108-EEP | 4-1/2" | 13-1/2" | 5.3 | 365,400 | 1,827,000 |
| HH-112-EEP | 4-5/8" | 14" | 5.46 | 376,000 | 1,880,000 |
| HH-116-EEP | 4-3/4" | 14-1/2" | 5.87 | 385,400 | 1,927,000 |
| HH-120-EEP | $5^{\prime \prime}$ | $15^{\prime \prime}$ | 6.06 | 413,900 | 2,069,500 |
| HH-124-EEP | 5-1/8" | 15-1/2" | 6.57 | 442,400 | 2,212,000 |
| HH-128-EEP | 5-1/4" | 16 " | 7.03 | 471,000 | 2,355,000 |
| HH-132-EEP | 5-1/2" | 16-1/2" | 7.49 | 499,500 | 2,497,500 |
| HH-136-EEP | 5-5/8" | 17" | 8.13 | 528,000 | 2,640,000 |
| HH-140-EEP | 5-3/4" | 17-1/2" | 8.71 | 556,500 | 2,782,500 |
| HH-144-EEP | $6{ }^{\prime \prime}$ | 18" | 9.32 | 585,000 | 2,925,000 |
| HH-148-EEP | 6-1/8" | 18-1/2" | 9.85 | 613,600 | 3,068,000 |
| HH-152-EEP | 6-1/4" | $19^{\prime \prime}$ | 10.38 | 642,100 | 3,210,500 |
| HH-156-EEP | 6-1/2" | 19-1/2" | 11.03 | 670,600 | 3,353,000 |
| HH-160-EEP | 6-5/8" | 20" | 11.59 | 699,200 | 3,496,000 |
| HH-164-EEP | 6-3/4" | 20-1/2" | 12.27 | 727,700 | 3,638,500 |
| HH-168-EEP | $7{ }^{\prime \prime}$ | 21" | 12.84 | 756,200 | 3,781,000 |
| HH-172-EEP | 7-1/8" | 21-1/2" | 13.34 | 792,700 | 3,963,500 |
| HH-176-EEP | 7-1/4" | 22 " | 13.92 | 813,200 | 4,066,000 |
| HH-180-EEP | 7-1/2" | 22-1/2" | 14.52 | 841,800 | 4,209,000 |
| HH-184-EEP | 7-5/8" | 23 " | 15.27 | 870,300 | 4,351,500 |
| HH-188-EEP | 7-3/4" | 23-1/2" | 15.89 | 898,800 | 4,494,000 |
| HH-192-EEP | 81 | 24 " | 16.53 | 927,400 | 4,637,000 |
| HH-196-EEP | 8-1/8" | 24-1/2" | 17.32 | 955,800 | 4,779,000 |
| HH-200-EEP | 8-1/4" | 25 " | 17.98 | 984,400 | 4,922,000 |



## Features \& Benefits

-Highest Strength
-Lowest Stretch
-Low Creep
-Soft Hand
-Torque Free -Easy Splicing -Floats

## Applications

-Replacement for Wire Rope

- Vessel Mooring
-Inland River Barge Lines
-Lifting Slings
-Winch Lines
-Aerial Retrieval Lines
-Emergency Tow Packages

| Specific gravity | $0.98^{\star}$ |
| :--- | :--- |
| Melting point | $284^{\circ} \mathrm{F}\left(140^{\circ} \mathrm{C}\right)^{\star}$ |
| Critical temp. | $150^{\circ} \mathrm{F}\left(65^{\circ} \mathrm{C}\right)^{*}$ |
| Coefficient of friction | $0.09-0.12-$ |
| Elongation at break | $4 \%-5 \%$ |
| Fiber water absorption | $0 \%$ |
| UV resistance | moderate |
| Wet abrasion | superior |
| Dry abrasion | superior |

*-value based on date supplied by the fiber manufacturer for new, dry fiber

Tensile Strengths are determined in accordance with Cordage Institute 1500.2.
Test Methods for Fiber Rope. Minimum Tensile Strength (MTS) published Assumes spliced terminations. Weight are calculated at linear density under stated preload (200d2) plus 4\%.

## HMPE Slings Endless Grommet

## HH-EP



| HHI PART NUMBER | Nominal Diameter | Size \# (Circ.) | Approx. Wgt Rope |  | Sling Minimum Tensile Strength Vertical |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Inches | Inches | Lbs/FT | Pounds | Pounds |
| HH-11-EP | 7/16" | 1-1/4" | 0.042 | 6,930 | 34,650 |
| HH-12-EP | 1/2" | 1-1/2" | 0.064 | 10,329 | 51,645 |
| HH-14-EP | 9/16" | 1-3/4" | 0.079 | 12,507 | 62,535 |
| HH-16-EP | 5/8" | 2 " | 0.106 | 16,962 | 84,810 |
| HH-18-EP | 3/4" | 2-1/4" | 0.133 | 22,605 | 113,025 |
| HH-22-EP | 7/8" | 2-3/4" | 0.196 | 30,558 | 152,790 |
| HH-24-EP | $1{ }^{\prime \prime}$ | $3^{\prime \prime}$ | 0.234 | 36,300 | 181,500 |
| HH-28-EP | 1-1/8" | 3-1/2" | 0.319 | 48,510 | 242,550 |
| HH-30-EP | 1-1/4" | 3-3/4" | 0.362 | 54,450 | 272,250 |
| HH-32-EP | 1-5/16" | $4{ }^{\prime \prime}$ | 0.417 | 64,680 | 323,400 |
| HH-36-EP | 1-1/2" | 4-1/2" | 0.517 | 72,930 | 364,650 |
| HH-40-EP | 1-5/8" | $5 "$ | 0.66 | 96,030 | 480,150 |
| HH-44-EP | 1-3/4" | 5-1/2" | 0.78 | 103,620 | 518,100 |
| HH-48-EP | 2 " | 6 " | 0.91 | 117,150 | 585,750 |
| HH-52-EP | 2-1/8" | 6-1/2" | 1.09 | 141,240 | 706,200 |
| HH-56-EP | 2-1/4" | $7{ }^{\text {" }}$ | 1.22 | 158,730 | 793,650 |
| HH-60-EP | 2-1/2" | 7-1/2" | 1.48 | 174,900 | 874,500 |
| HH-64-EP | 2-5/8" | 8" | 1.67 | 196,680 | 983,400 |
| HH-68-EP | 2-3/4" | 8-1/2" | 1.87 | 217,800 | 1,089,000 |
| HH-72-EP | $3{ }^{\prime \prime}$ | $9 "$ | 2.14 | 257,400 | 1,287,000 |
| HH-76-EP | 3-1/8" | 9-1/2" | 2.35 | 280,500 | 1,402,500 |
| HH-80-EP | 3-1/4" | $10^{\prime \prime}$ | 2.61 | 310,200 | 1,551,000 |
| HH-84-EP | 3-1/2" | 10-1/2" | 2.98 | 365,640 | 1,828,200 |
| HH-88-EP | 3-5/8" | 111 | 3.24 | 412,500 | 2,062,500 |
| HH-92-EP | 3-3/4" | 11-1/2" | 3.43 | 434,610 | 2,173,050 |
| HH-96-EP | $4{ }^{\prime \prime}$ | $12^{\prime \prime}$ | 3.94 | 501,600 | 2,508,000 |
| HH-100-EP | 4-1/8" | 12-1/2" | 4.57 | 535,260 | 2,676,300 |
| HH-104-EP | 4-1/4" | $13^{\prime \prime}$ | 5.14 | 560,010 | 2,800,050 |
| HH-108-EP | 4-1/2" | 13-1/2" | 5.3 | 602,910 | 3,014,550 |
| HH-112-EP | 4-5/8" | 14 | 5.46 | 620,400 | 3,102,000 |
| HH-116-EP | 4-3/4" | 14-1/2" | 5.87 | 635,910 | 3,179,550 |
| HH-120-EP | $5{ }^{\prime \prime}$ | $15^{\prime \prime}$ | 6.06 | 682,935 | 3,414,675 |
| HH-124-EP | 5-1/8" | 15-1/2" | 6.57 | 729,960 | 3,649,800 |
| HH-128-EP | 5-1/4" | $16{ }^{\prime \prime}$ | 7.03 | 777,150 | 3,885,750 |
| HH-132-EP | 5-1/2" | 16-1/2" | 7.49 | 824,175 | 4,120,875 |
| HH-136-EP | 5-5/8" | $17^{\prime \prime}$ | 8.13 | 871,200 | 4,356,000 |
| HH-140-EP | 5-3/4" | 17-1/2" | 8.71 | 918,225 | 4,591,125 |
| HH-144-EP | $6 "$ | $18^{\prime \prime}$ | 9.32 | 965,250 | 4,826,250 |
| HH-148-EP | 6-1/8" | 18-1/2" | 9.85 | 1,012,440 | 5,062,200 |
| HH-152-EP | 6-1/4" | 19" | 10.38 | 1,059,465 | 5,297,325 |
| HH-156-EP | 6-1/2" | 19-1/2" | 11.03 | 1,106,490 | 5,532,450 |
| HH-160-EP | 6-5/8" | 201 | 11.59 | 1,153,680 | 5,768,400 |
| HH-164-EP | 6-3/4" | 20-1/2" | 12.27 | 1,200,705 | 6,003,525 |
| HH-168-EP | $7{ }^{\prime \prime}$ | 21" | 12.84 | 1,247,730 | 6,238,650 |
| HH-172-EP | 7-1/8" | 21-1/2" | 13.34 | 1,307,955 | 6,539,775 |
| HH-176-EP | 7-1/4" | 22 " | 13.92 | 1,341,780 | 6,708,900 |
| HH-180-EP | 7-1/2" | 22-1/2" | 14.52 | 1,388,970 | 6,944,850 |
| HH-184-EP | 7-5/8" | 23 " | 15.27 | 1,435,995 | 7,179,975 |
| HH-188-EP | 7-3/4" | 23-1/2" | 15.89 | 1,483,020 | 7,415,100 |
| HH-192-EP | 8" | $24 "$ | 16.53 | 1,530,210 | 7,651,050 |
| HH-196-EP | 8-1/8" | 24-1/2" | 17.32 | 1,577,070 | 7,885,350 |
| HH-200-EP | 8-1/4" | $25{ }^{\prime \prime}$ | 17.98 | 1,624,260 | 8,121,300 |



Features \& Benefits -Highest Strength -Lowest Stretch

- Low Creep
- Soft Hand
-Torque Free
-Easy Splicing -Floats


## Applications

-Replacement for Wire Rope
-Vessel Mooring

- Inland River Barge Lines
-Lifting Slings
-Winch Lines
- Aerial Retrieval Lines
-Emergency Tow Packages

Tensile Strengths are determined in accordance with Cordage Institute 1500.2.
Test Methods for Fiber Rope. Minimum Tensile Strength (MTS) published
Assumes spliced terminations. Weight are calculated at linear density under stated preload (200d2) plus $4 \%$.
<-> Design Factor 5:1 <-> Minimum D/d 3:1

# HMPE Slings HammerHead Slings 

## HiquMer

## High Strength

Light Weight
Durable

## Repairable

## Low Stretch

## 100\% Proof Tested

Rated Capacities in Pounds

| Part No. | Vertical* | Choker | Vertical Basket** | $\begin{gathered} \text { Min } \\ \text { length } \end{gathered}$ | Rope Dia. | Approx Sling Dia. | Approx wgt per linar foot of sling |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HH-9-EPC | 5,700 | 4,600 | 11,500 | $2^{\prime}$ | 3/8" | 1/2" | 0.09 |
| HH-11-EPC | 6,900 | 5,500 | 13,800 | 2 | 7/16" | 9/16" | 0.11 |
| HH-12-EPC | 10,300 | 8,200 | 20,600 | $2 '$ | 1/2" | 11/16" | 0.16 |
| HH-16-EPC | 16,900 | 13,500 | 33,900 | 2 | 5/8" | 7/8" | 0.27 |
| HH-18-EPC | 22,600 | 18,000 | 45,200 | $2^{\prime}$ | $3 / 4{ }^{\prime \prime}$ | $1 "$ | 0.33 |
| HH-22-EPC | 30,500 | 24,400 | 61,000 | $2.5{ }^{\text {' }}$ | 7/8" | 1-3/16 ${ }^{\prime \prime}$ | 0.49 |
| HH-24-EPC | 36,300 | 29,000 | 72,600 | $2.5{ }^{\prime}$ | 1" | 1-3/8" | 0.59 |
| HH-28-EPC | 48,500 | 38,800 | 97,000 | 3 | 1-1/8" | 1-1/2" | 0.80 |
| HH-30-EPC | 54,400 | 43,500 | 108,800 | 3 | 1-1/4" | 1-5/8" | 0.91 |
| HH-36-EPC | 72,000 | 58,000 | 145,000 | 3.5 | 1-1/2" | 21 | 1.29 |
| HH-40-EPC | 96,000 | 76,000 | 192,000 | 3.5 | 1-5/8" | 2-3/16" | 1.65 |
| HH-44-EPC | 103,000 | 82,000 | 207,000 | 4 | 1-3/4" | 2-3/8" | 1.95 |
| HH-48-EPC | 117,000 | 93,000 | 234,000 | 4 | $2 "$ | 2-5/8" | 2.28 |
| HH-52-EPC | 141,000 | 112,000 | 282,000 | $4.5{ }^{\prime}$ | 2-1/8" | 2-7/8" | 2.73 |
| HH-56-EPC | 158,000 | 126,000 | 317,000 | 4.5 | 2-1/4" | 31 | 3.05 |
| HH-60-EPC | 174,000 | 139,000 | 349,000 | 5 | 2-1/2" | 3-3/8" | 3.70 |
| HH-64-EPC | 196,000 | 157,000 | 393,000 | 5 | 2-5/8" | 3-1/2" | 4.18 |
| HH-68-EPC | 217,000 | 174,000 | 435,000 | $6^{\prime}$ | 2-3/4" | 3-5/8" | 4.68 |
| HH-72-EPC | 257,000 | 205,000 | 514,000 | $6.5{ }^{\text {' }}$ | $3{ }^{\prime \prime}$ | 4" | 5.35 |
| HH-76-EPC | 280,000 | 224,000 | 561,000 | $6.5{ }^{\prime}$ | 3-1/8" | 4-1/8" | 5.88 |
| HH-80-EPC | 310,000 | 248,000 | 620,000 | $6.5{ }^{\prime}$ | 3-1/4" | 4-3/8" | 6.53 |
| HH-84-EPC | 365,000 | 292,000 | 731,000 | 7.5 ${ }^{1}$ | 3-1/2" | 4-5/8" | 7.45 |
| HH-88-EPC | 412,000 | 330,000 | 825,000 | 7.5 | 3-5/8" | 4-7/8" | 8.10 |
| HH-96-EPC | 501,000 | 401,000 | 1,003,000 | 8.51 | $4 "$ | 5-3/8" | 9.85 |

*Your minimum D/d is 2:1. However, it is suggested to use the sling at a $3: 1 \mathrm{D} / \mathrm{d}$ to increase the longevity of the sling's lifespan. Sling's working load is based on a $5: 1$ factor of safety.

## Bending Guidance

In theory, a sling used in a basket configuration could have twice the working load as a sling in a vertical configuration because two ropes are now holding the load instead of one. However, because of bending reductions this theory is incorrect. Users must reduce that factor-of-two by an efficiency factor (i.e., a bending reduction factor).

The more tight a bend is, the more the bending efficiency reduces. If you have a gentle bend, the D:d ratio might be very high. But as the D:d ratio goes down, the bending reduction increases.

Example: a 5:1 D:d ratio provides only $97 \%$ efficiency.

| Reduced Basket <br> Capacity Calculation |
| :---: |
| $\mathbf{C = B \times e}$ |
| $\mathrm{C}=$ Reduced Basket |
| Capacity due to |
| bending efficiency |
| reduction |
| $\mathrm{B}=$ Rated Basket |
| Capacity with |
| consideration of |
| horizontal sling fleet |
| angle |
| $\mathrm{e}=$Bending efficiency <br> percentage |

Represents a contact surface with a D:d ratio of one or greater. Refer to the Efficiency Table for deductions as needed.

| Efficiency Table |  |
| :---: | :---: |
| D:d Ratio | eff \% (e) |
| $8: 1$ | $100.0 \%$ |
| $5: 1$ | $97.0 \%$ |
| $3: 1$ | $91.0 \%$ |
| $2: 1$ | $88.0 \%$ |
| $\mathbf{1}: 1$ | $79.0 \%$ |



